S S S S S

5 S's
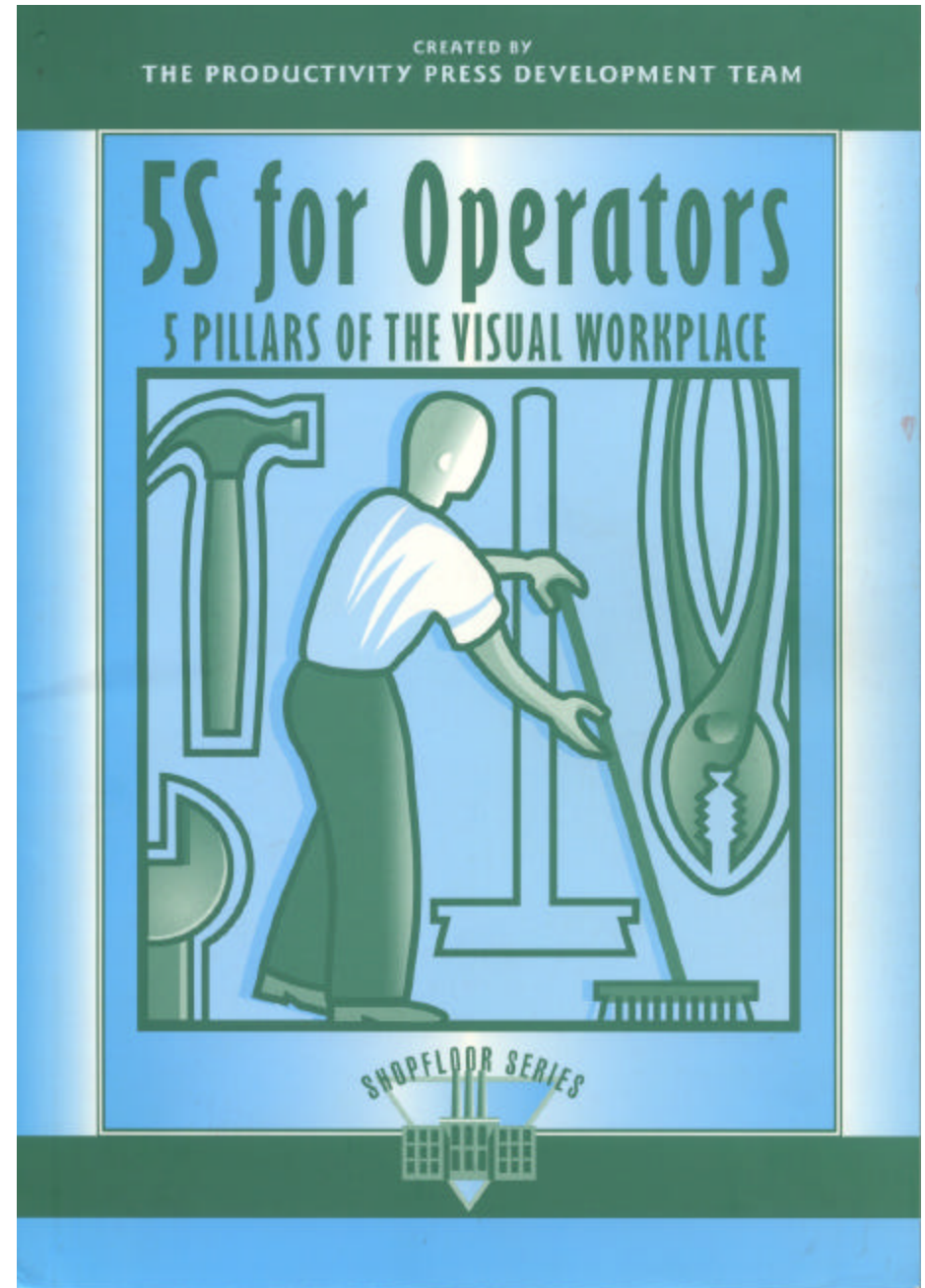5 Pillars of the
Visual Workplace

Before we begin I would
like to thank the originator
of the material for our class.

5S for Operators
5 Pillars of the Visual Workplace
Created by
The Productivity Press
Development Team

Based on
5 Pillars of the Visual Workplace:
The Sourcebook for 5S Implementation
by Hiroyuki Hirano

Productivity Press
Portland, Oregon

CREATED BY
THE PRODUCTIVITY PRESS DEVELOPMENT TEAM

5S for Operators
5 PILLARS OF THE VISUAL WORKPLACE

SHOPFLOOR SERIES

5 S's
5 Pillars of the
Visual Workplace

Seiri
Organization
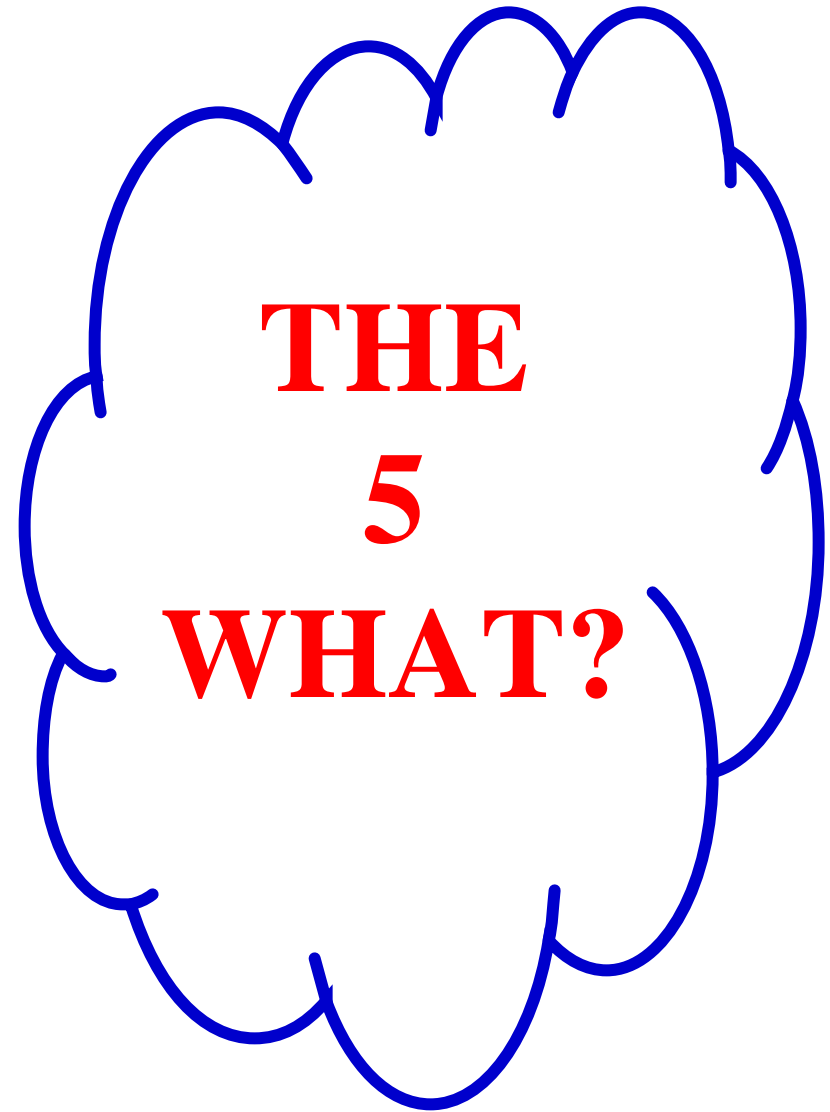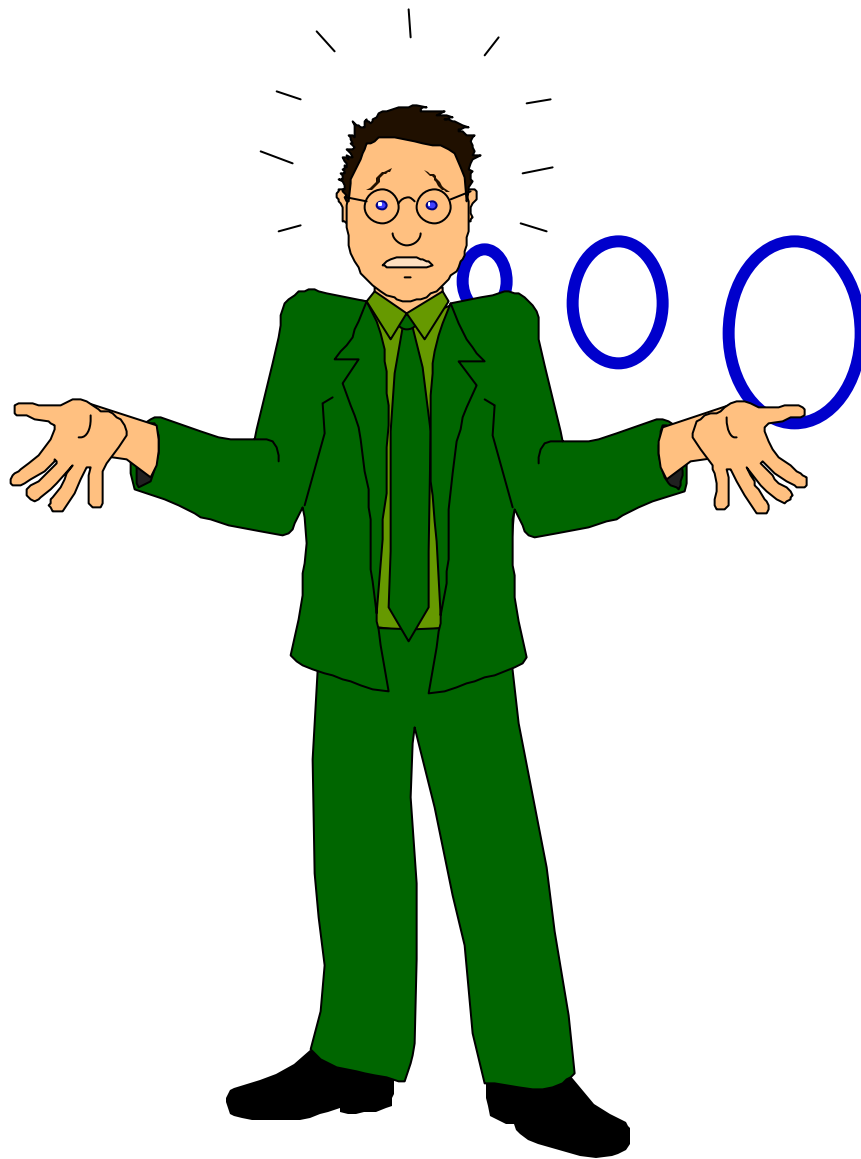**Seiton**
Orderliness
Seiso
Cleanliness
Seiketsu
Standardized Cleanup
Shitsuke
Discipline

THE
5
WHAT?

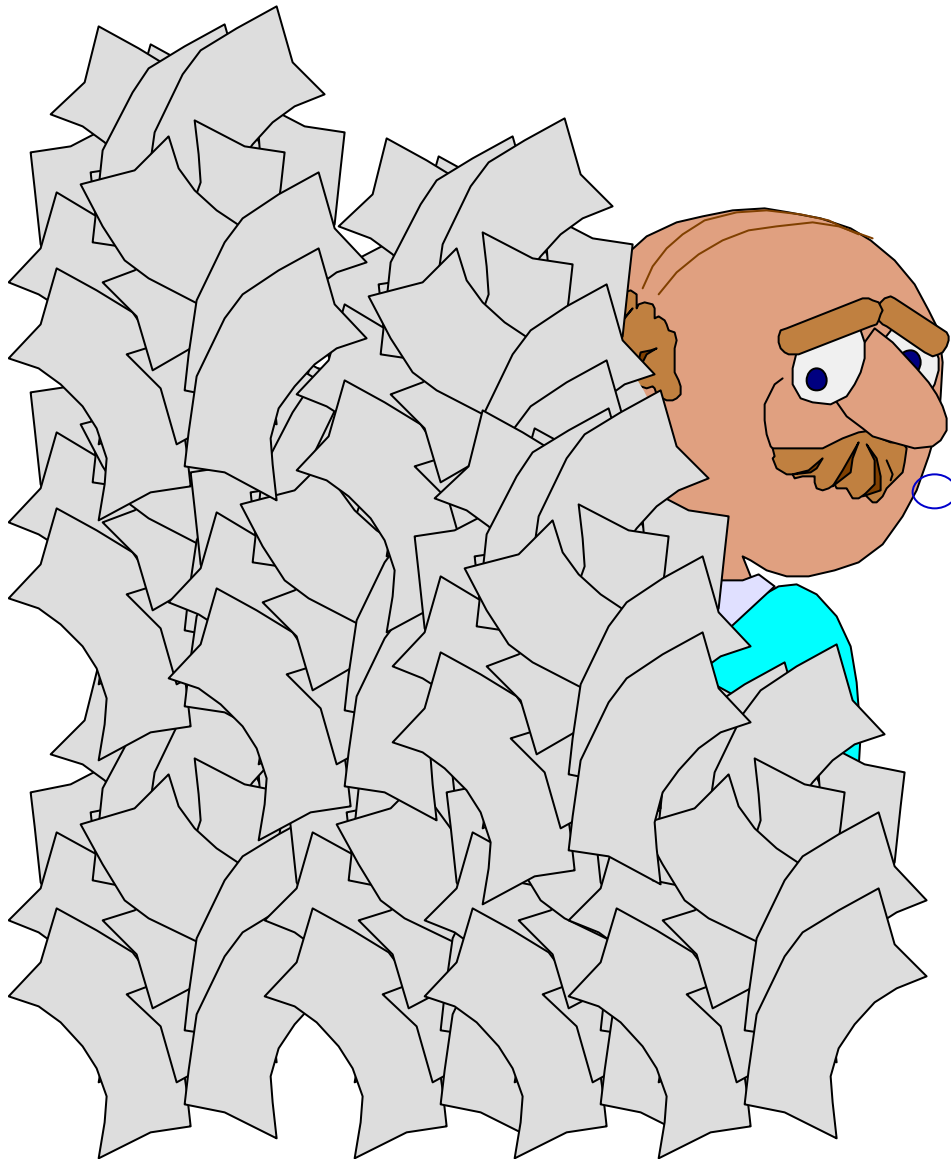# 5 PILLARS

ORGANIZATION

ORDERLINESS

CLEANLINESS

STANDARDIZED CLEANUP

DISCIPLINE

5 PILLARS

ORGANIZATION

ORGANIZATION

Organization, the first pillar of the visual workplace, corresponds to the just-in-time (JIT) principle of "only what is needed, only in the amounts needed, and only when it is needed."

Organization means removing from the workplace all items that are not needed for current production operations.

ORGANIZATION

I need more room!

I need more people to keep track of this stuff!

I need more money, to buy things to hold all this stuff!

I don't have enough time to do my work, I have to straighten all this stuff!

I can't get that right now, I have to go through all this stuff to find what you need!

ORGANIZATION

Problems Avoided by Organization!

Workplace becomes crowded and hard to work in.

Lockers, shelves, & cabinets for storage of unneeded items.

Time is wasted in search of parts and tools.

Unneeded inventory is costly to maintain.

Excess stock-on-hand hides other potential problems.

Unneeded items & equipment make it harder to improve the process flow.

RED-TAGGING

FSN, PART NO. AND ITEM DESCRIPTION

UNSERVICEABLE (UNREPARABLE)
TAG - MATERIEL

INSPECTION ACTIVITY

CONDITION CODE

REASON FOR REPARABLE CONDITION

SERIAL NO/LOT NO

UNIT OF ISSUE

REMOVED FROM

CONTRACT OR PURCHASE ORDER NO

QUANITY

INSPECTOR'S NAME OR STAMP AND DATE

REMARKS

DD FORM 1577-2   1 OCT 66

Is this item needed?
If it is needed, is it needed in this quantity?
If it is needed, does it need to be located here?

RED-TAGGING

FSN, PART NO. AND ITEM DESCRIPTION

UNSERVICEABLE (UNREPARABLE)
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INSPECTION ACTIVITY

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INSPECTOR'S NAME OR STAMP AND DATE

REMARKS

DD FORM 1577-2 1 OCT 66

Once identified, evaluate & deal with it appropriately.

Hold in a "Red-Tag holding Area" for a specified time.

Dispose of it.

Relocate it.

5 PILLARS

ORDERLINESS

ORDERLINESS

Orderliness means arranging needed items so that they are easy to use and labeling them so that anyone can find them and put them away.

The key word is "ANYONE."

Orderliness eliminates waste in searching, using, and returning items.

ORDERLINESS

Problems Avoided by Orderliness.

Motion Waste
The person sent to get the cart can't find it.

Searching Waste
No one can find the key for the cabinet.

Waste of Human Energy
A frustrated worker gives up after searching for an hour.

ORDERLINESS
Problems Avoided by Orderliness

Waste of Excess Inventory

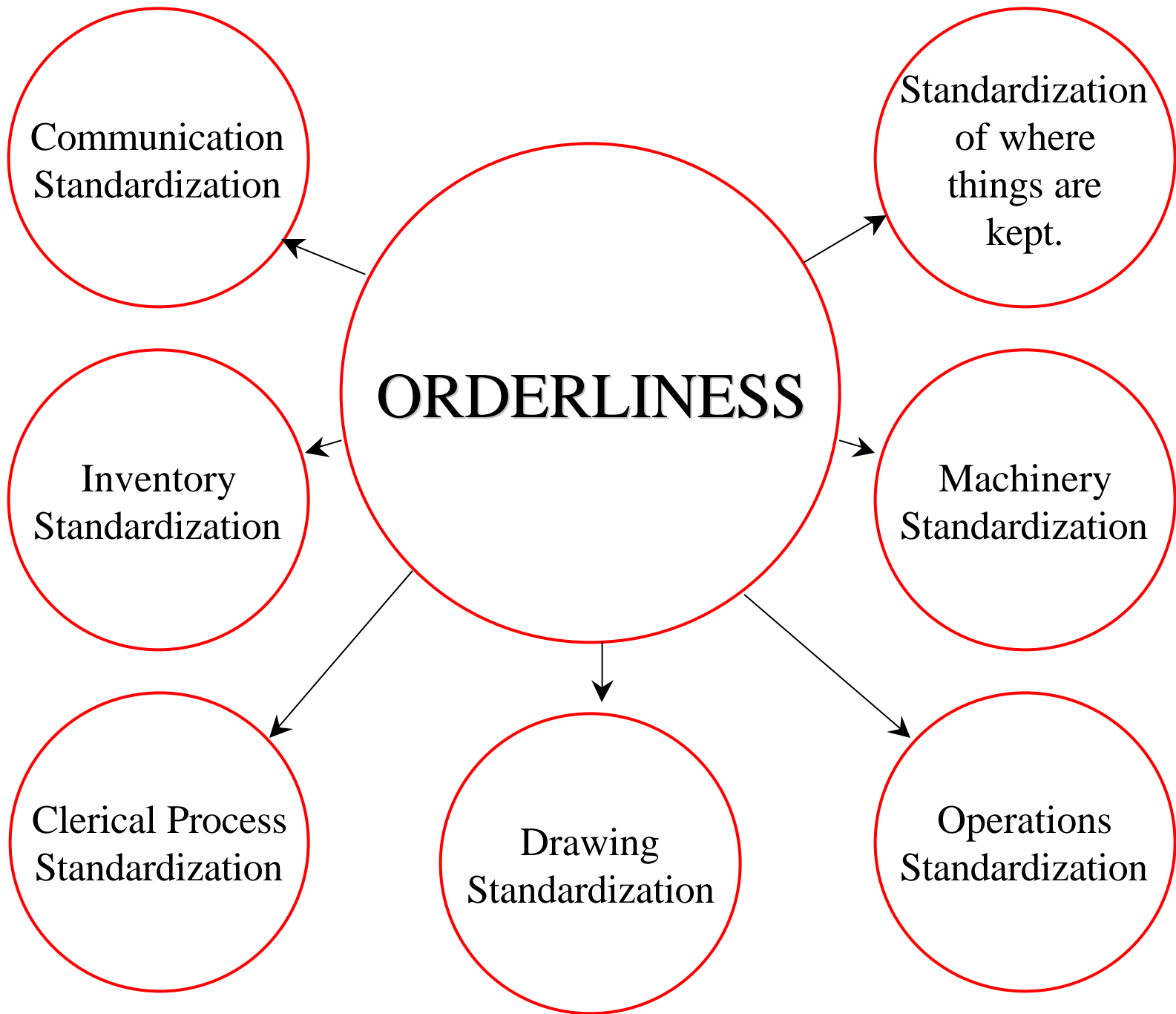Desk drawers crammed full of pencils, markers, & office supplies.
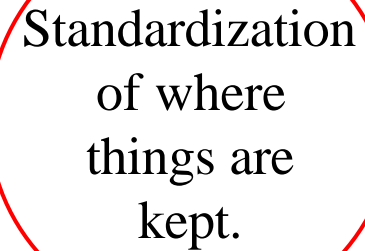
Waste of Defective Products

Location of two different items are switched and the user is not told; results the user uses the wrong item.

Waste of Unsafe Conditions

Excess items stored in walkways cause trips & injures.

Standardization of where things are kept.

Wouldn't it be nice to find things in the same place all the time? When is the last time you went away for a week or even a day, only to come back to everything being located in a different place and no instructions of where the items went.

Communication
Standardization

Wouldn't it be nice if once a standard
is established it is communicated
to all individuals involved in the process.

Wouldn't it be nice if we all used the same type of materials to get the job done.

Inventory Standardization

Wouldn't it be nice if the computers or other items we use were the same and we didn't have to relearn everything again.

Machinery Standardization

Wouldn't it be nice if one office's process was the same as the next ones.

Clerical Process Standardization

Wouldn't it be nice if our organization
conducted business the same way in
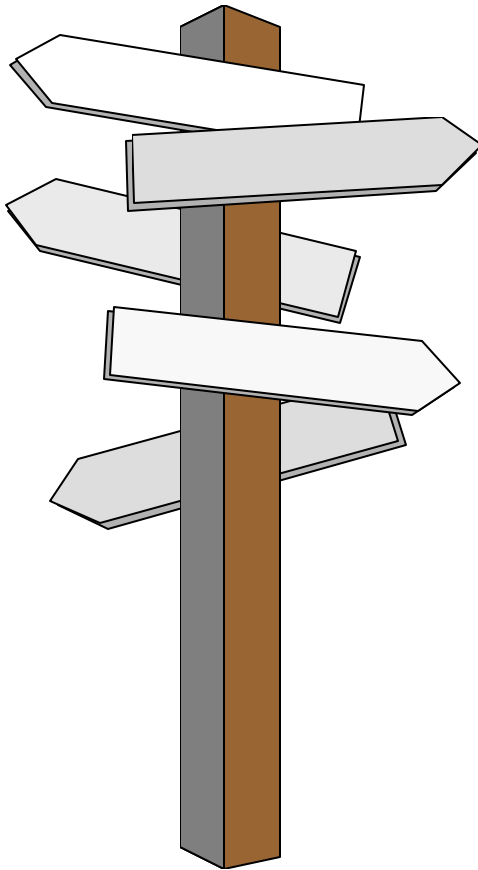all of the locations.

Operations
Standardization

Wouldn't it be nice if there was a visual map you could look at and know what to do at a glance.

Drawing Standardization

HOW DO I GET THERE?

- Have you ever tried to get to where you are going without a map and street signs to help you.

- What would it be like without these two items we take for granted.
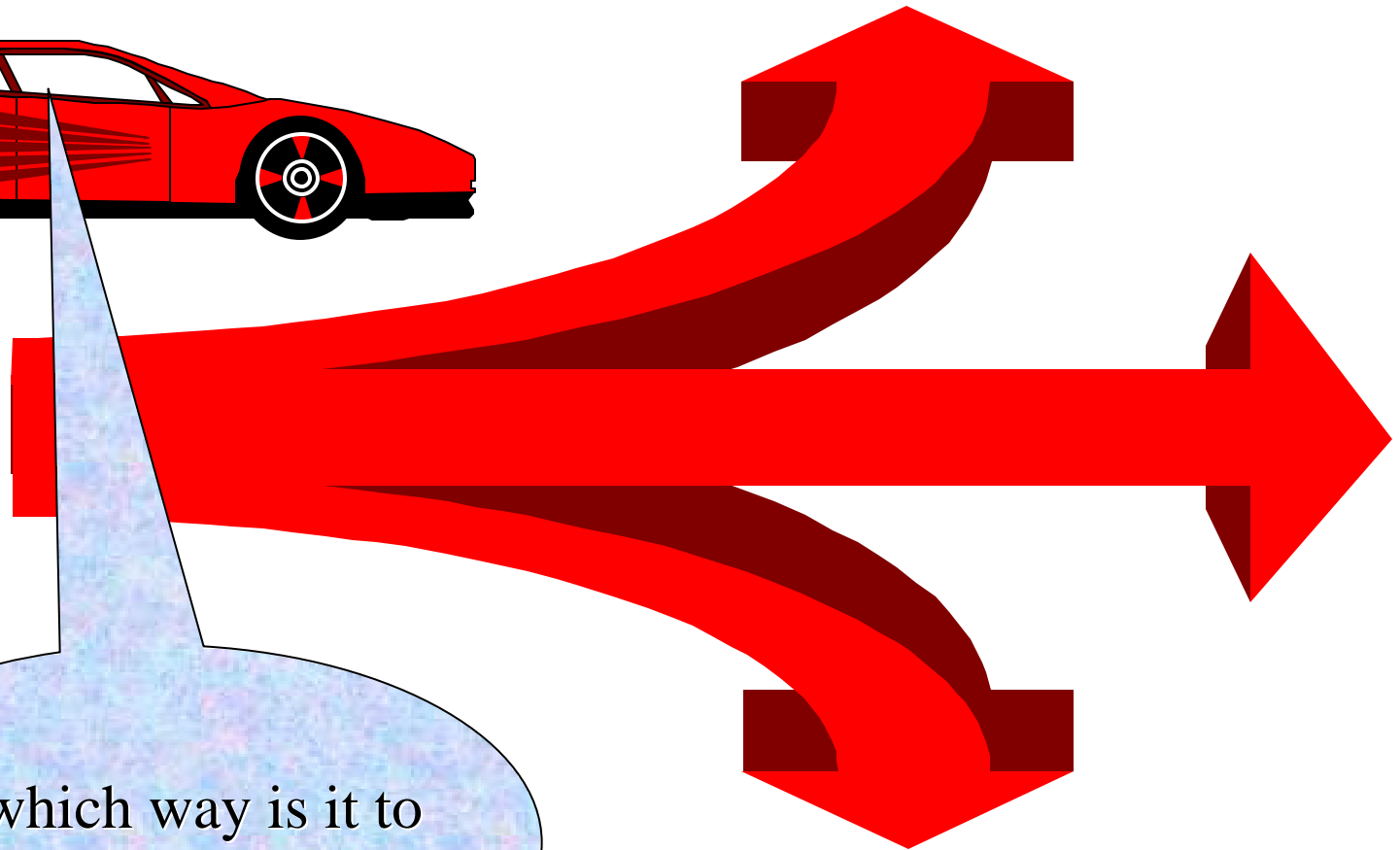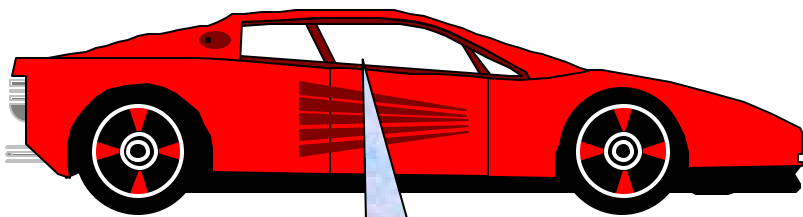
So which way is it to Frankfurt Airport?

VISUAL CONTROLS

Visual Controls are used to communicate information such as:

Where items belong

How many items belong there

What the standard procedure is for something

The status of work in progress

VISUAL CONTROLS

A Visual Control is any communication device used in the work environment that tells us at a glance how work should be done.

BEFORE	AFTER
	If arrow is above 240 Degrees Turn Off at Once
240	240
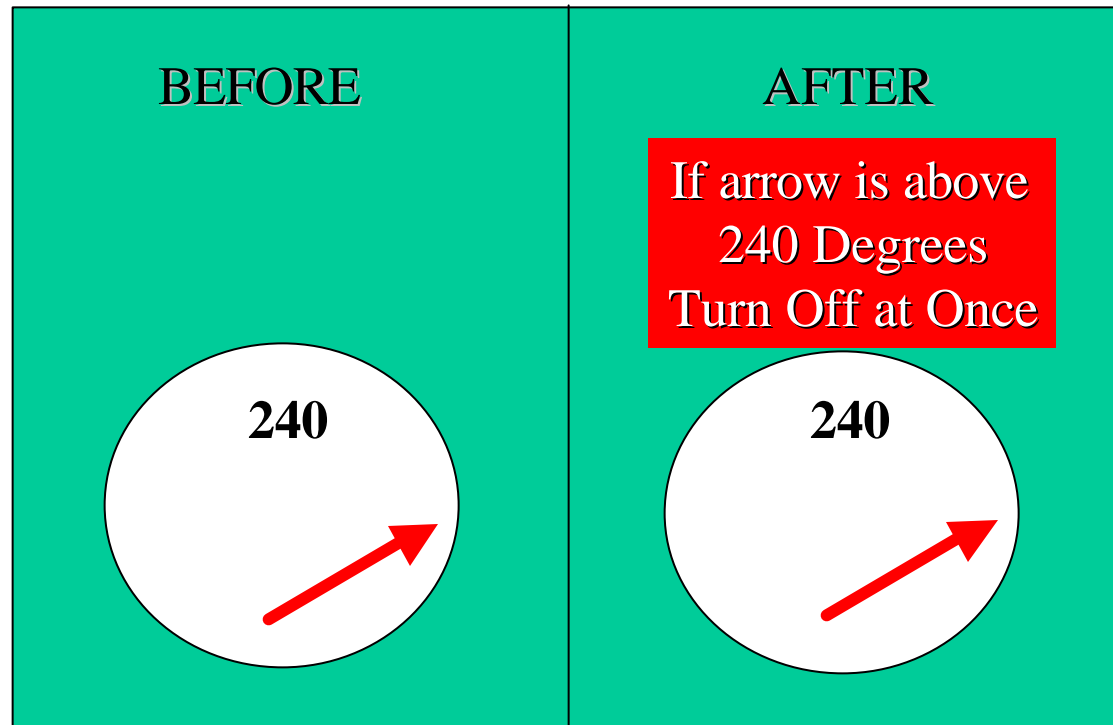
VISUAL CONTROLS

Now where were these tools at in the first place?
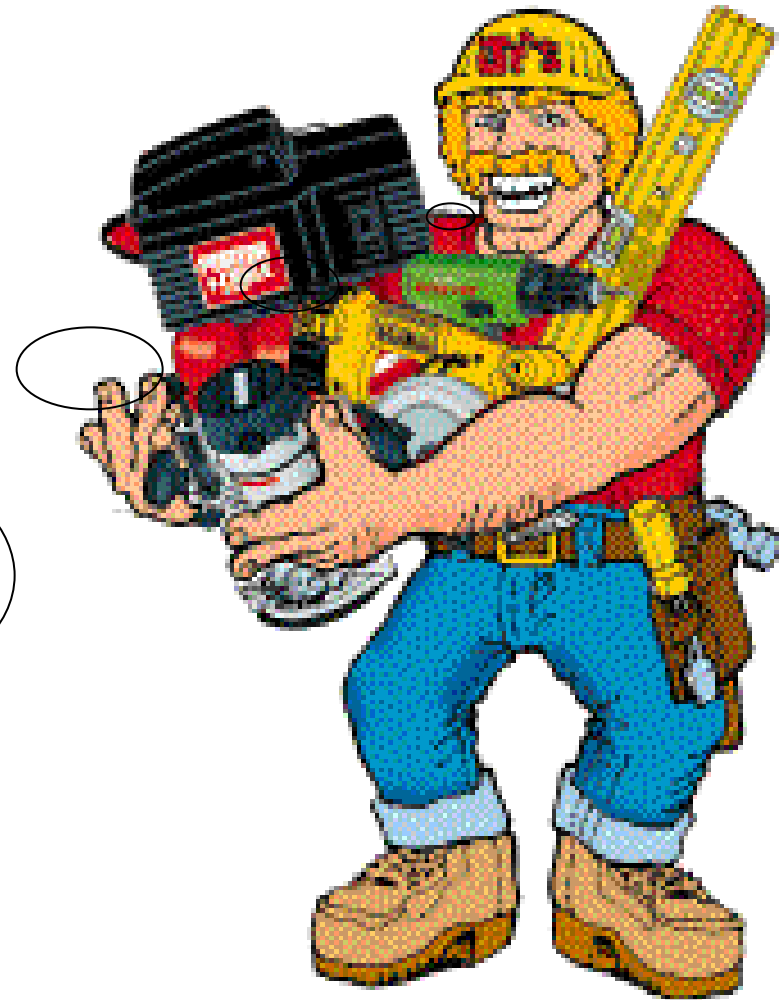
VISUAL CONTROLS

A Visual Control communicates where an item belongs in the workplace at a glance.

Wrench / Crescent / Screwdriver / Spanner / Hammer
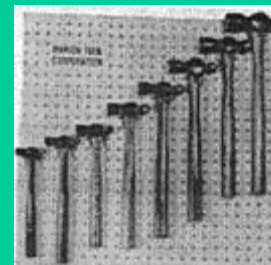
VISUAL CONTROLS

AFTER USING A SHADOW BOARD

S 1 / MONITORED ITEMS
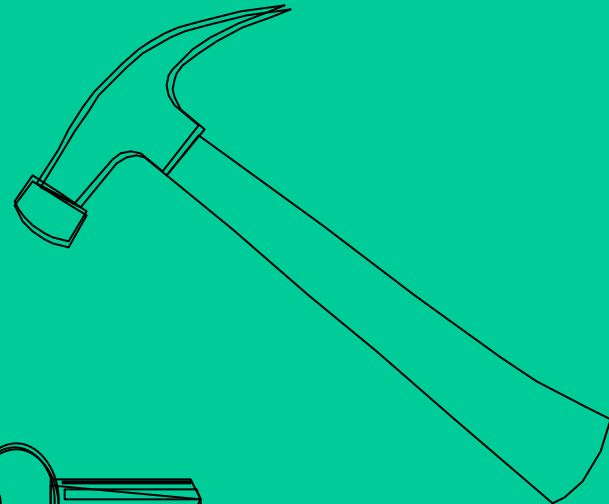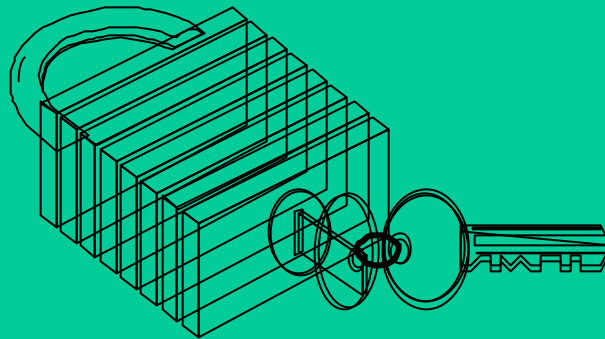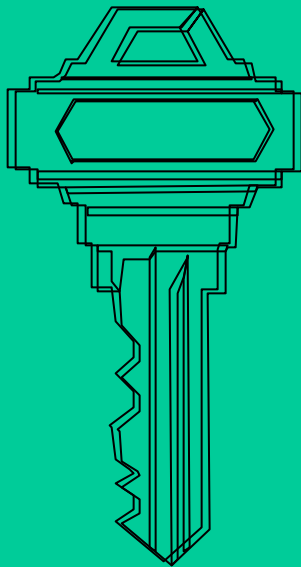
EVER WONDER HOW A
5 STAR HOTEL BECOMES
A 5 STAR HOTEL?
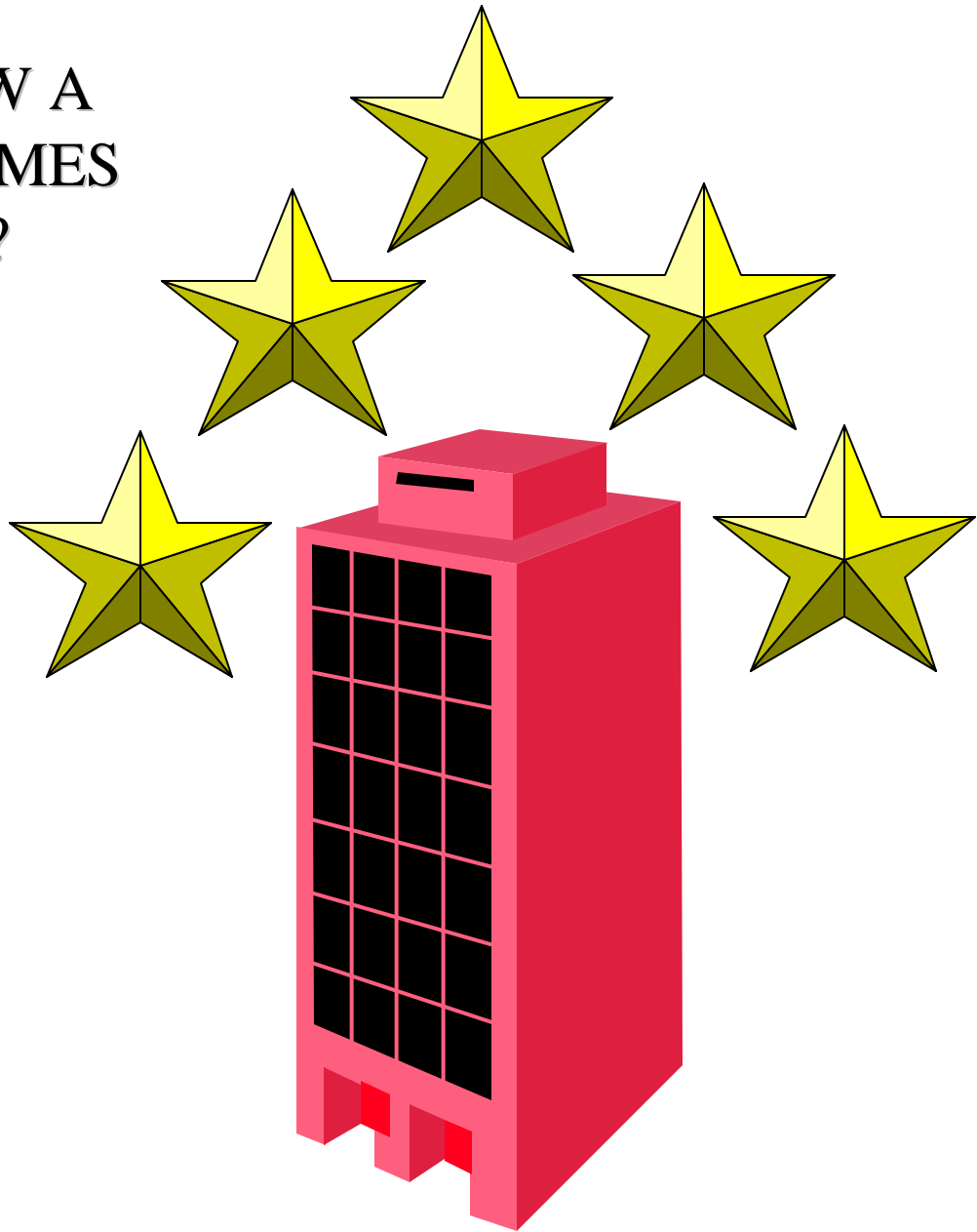
5 PILLARS

CLEANLINESS

CLEANLINESS

One of the obvious purposes of cleanliness is to turn the work-place into a clean, bright place where everyone will enjoy working.

Another key purpose is to keep everything in top condition so that when someone needs to use something, it is ready to be used.

CLEANLINESS

We should abandon the inadequate tradition of annual "year-end" or "spring" cleanings.

Instead, cleaning should become a deeply ingrained part of daily work habits, so that tools, equipment, and work areas will be ready for use all the time.

CLEANLINESS

Problems Avoided by Cleanliness.

Defects are less obvious in messy areas.

Equipment that does not receive sufficient check-up maintenance tend to break down frequently.

Filthy work environments can lower morale.

CLEANLINESS

WHY ARE PLANES KEEP CLEAN?

CLEANLINESS

LIFE IS EXPENSIVE!

CLEANLINESS

Determine Cleanliness Targets

Warehouse Items

Raw Materials, Parts, & Finished Products

Equipment

Machines, Tools, Worktables, Cabinets, Desks, Chairs, Other Equipment

Space

Floors, Work Areas, Walkways, Walls, Ceilings, Windows, Shelves, Closets, Rooms, & Lights

CLEANLINESS

Determine Cleanliness Assignments

Workplace Cleanliness is the responsibility of everyone who works there.

5 Pillar Assignment Map

The assignment map shows all of the cleanliness areas and who is responsible for cleaning them.

5 Pillar Schedule

The schedule shows in detail who is responsible for cleaning which area on which day. The schedule is posted in the work area.

CLEANLINESS

DETERMINE CLEANLINESS METHODS

Decide Cleanliness targets & tools

Define what will be cleaned in each area and what supplies and equipment will be used.

Performing Five-minute Cleanliness

Cleanliness should be practiced daily and should not require a lot of time.

Create standards of Cleanliness procedures

People need to know what procedures to follow in order to use their time efficiently or they will spend most of their time getting ready to clean.

5 PILLARS

STANDARDIZED

CLEANUP

STANDARDIZED CLEANUP

The state that exists when the first three pillars Organization, Orderliness, and Cleanliness are properly maintained.

The basic purpose of Standardized Cleanup is to prevent setbacks in the first three pillars, to make implementing them a daily habit, and to make sure that all three pillars are maintained in their fully implemented state.

STANDARDIZED CLEANUP

Problems Avoided by Standardized Cleanup.

Conditions go back to their old undesirable levels even after an organization wide five pillar implementation campaign.

At the end of the day, piles of unneeded items are left from the day's production and lie scattered around the production equipment.

Tool storage sites become disorganized and must be put back in order at the end of the day.

Even after implementing Organization and Orderliness, it does not take long for office workers to start accumulating more stationery supplies than they need.

STANDARDIZED CLEANUP

The three steps to making Organization, Orderliness, and Cleanliness a habit.

Step 1:

Decide who is responsible for which activities with regard to maintaining the three pillar conditions.

Step 2:

To prevent backsliding, integrate three pillar maintenance duties into regular work activities.

Step 3:

Check on how well the three pillar conditions are being maintained.

Step 1:

Decide who is responsible for which activities with regard to maintaining the three pillar conditions.
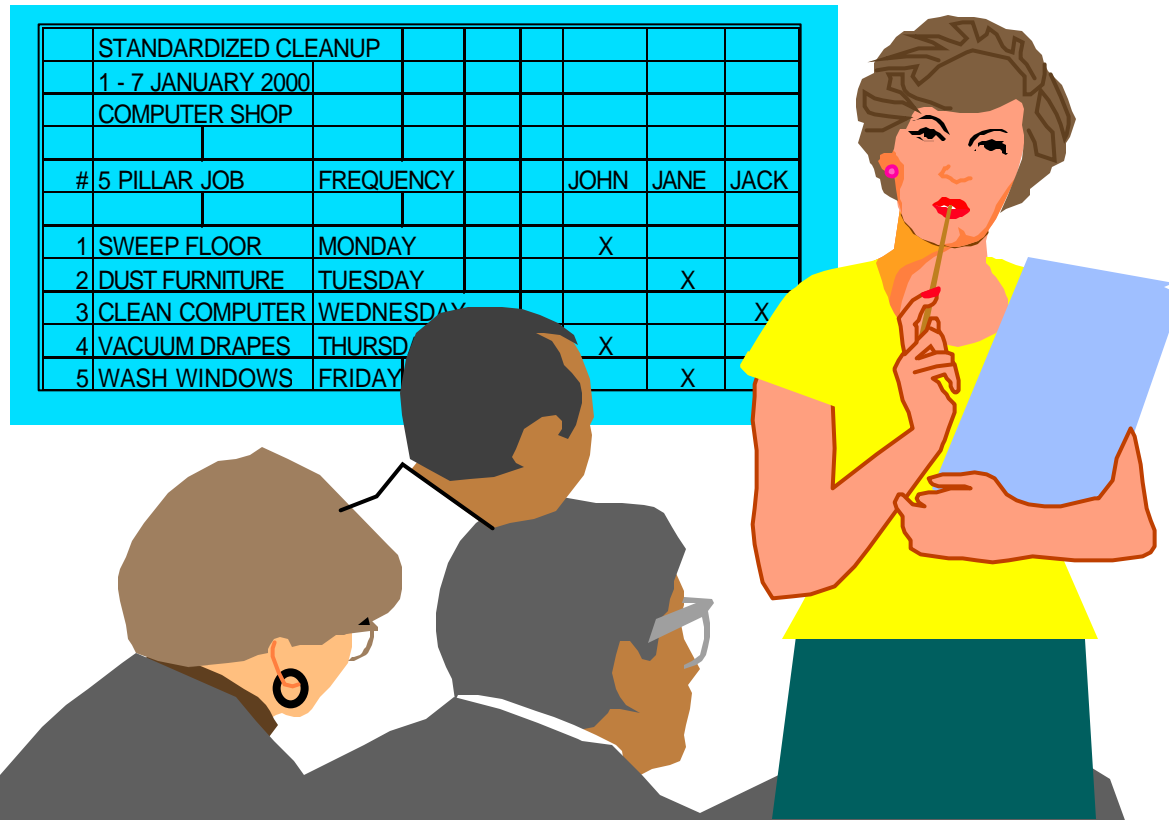
STANDARDIZED CLEANUP

	STANDARDIZED CLEANUP				JOHN	JANE	JACK
	1 - 7 JANUARY 2000						
	COMPUTER SHOP						
#	5 PILLAR JOB	FREQUENCY			JOHN	JANE	JACK
1	SWEEP FLOOR	MONDAY			X		
2	DUST FURNITURE	TUESDAY				X	
3	CLEAN COMPUTER	WEDNESDAY					X
4	VACUUM DRAPES	THURSDAY			X		
5	WASH WINDOWS	FRIDAY				X	

Step 3:

Check on how well the three pillar conditions are being maintained.

STANDARDIZED CLEANUP
The 5S Rating Scale

5	is	Surgery Room
4	is	Washed Eating Utensils
3	is	Kitchen Table
2	is	Kitchen Floor
1	is	Swept Garage Floor
0	is	Dirty Garage Floor

STANDARDIZED CLEANUP

	5 Pillar (5 point) Standardized Clean-up Evaluation Form					
#	Location	Organization	Orderliness	Cleanliness	Total	Previous Total
1						
2						
3						
4						
5						
Review by						
Date						

STANDARDIZED CLEANUP

The basic purpose of Standardized Cleanup is to prevent setbacks in the first three pillars, to make implementing them a daily habit, and to make sure that all three pillars are maintained in their fully implemented state.

STANDARDIZED CLEANUP

PREVENTION

The Concept of Prevention

When we find that tools have not been put back correctly, we immediately take care of them. When we find an oil puddle on the floor, we immediately mop it up. Making these actions habitual is the foundation of Standardized Cleanup. However, when the same problems keep happening over and over again, it is time to take the implementation of standardized cleanup to the next level:

PREVENTION

To take Standardized Cleanup to a higher level, we must ask "why"?

Why Do Unneeded Items Accumulate (Despite Organization)?

**Why Do Tools Get Put Back Incorrectly (Despite Orderliness)?**

Why Do Floors Get Dirty (Despite Cleanliness)?

When we ask "why" repeatedly, we eventually find the source of the problem.

STANDARDIZED CLEANUP
PREVENTION

Preventive Organization

Preventive Organization means that instead of waiting until unneeded items accumulate, we find ways to prevent their accumulation.
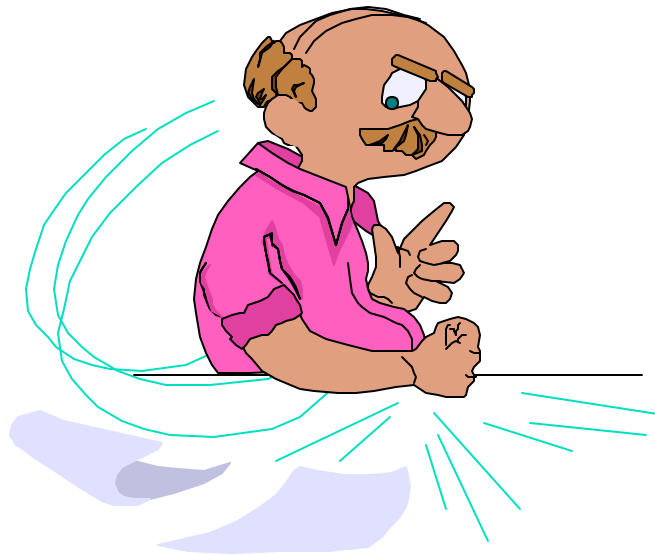
STANDARDIZED CLEANUP

PREVENTION

Preventive Orderliness

To achieve preventive Orderliness, we must somehow prevent the inefficiency that results from the lack of orderly control of any specific item.

There are two ways to do this:

Make It Difficult to Put Things in the Wrong Place

Make It Impossible to Put Things in the Wrong Place.
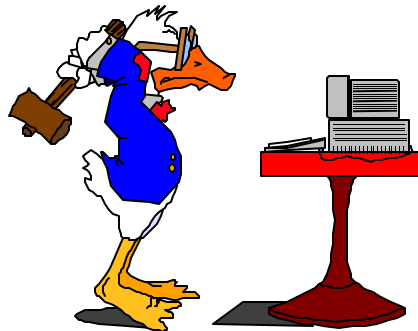
STANDARDIZED CLEANUP
PREVENTION

Preventive Cleanliness

Preventive Cleanliness means preventing things from getting dirty to begin with. The initial cleanup is very hard work. To minimize the drudgery of cleaning up, the key is to treat contamination problems at their source.
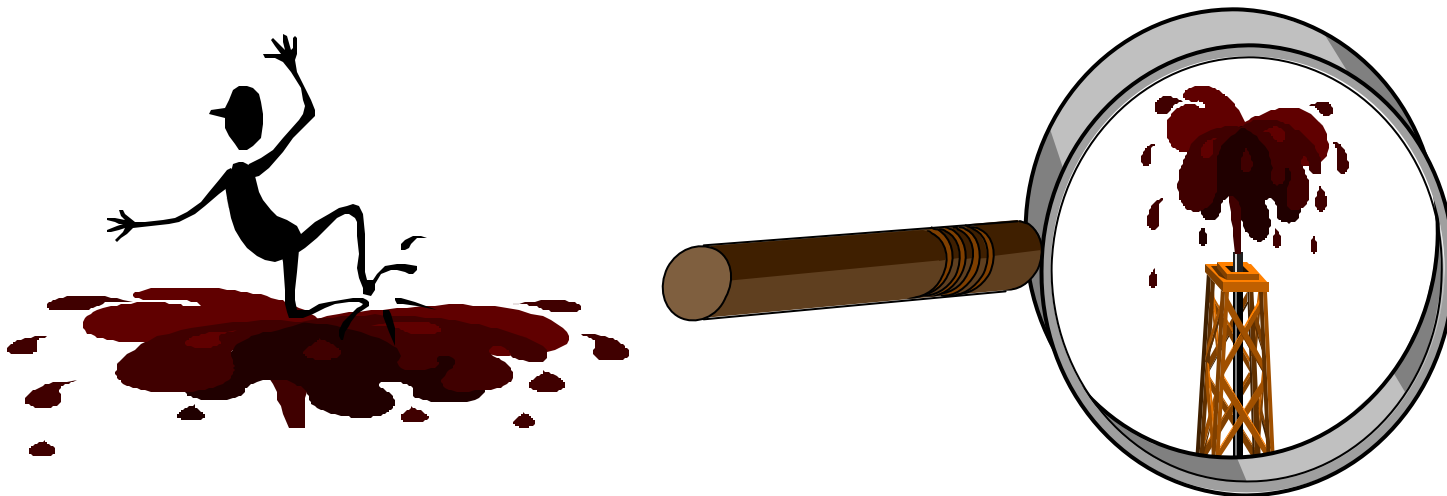
5 PILLARS

DISCIPLINE

DISCIPLINE

The Fifth Pillar Is Discipline.

The word "DISCIPLINE" carries with it the negative connotation of reprimands and warning slips. In the context of the five pillars, Discipline has a different meaning. It means making a habit of properly maintaining correct procedures.

DISCIPLINE

Problems Avoided by Implementing Discipline.

Unneeded items begin piling up as soon as implementation of Organization is completed.

No matter how well planned Orderliness implementation is, tools do not get returned to their designated places after use.

No matter how dirty equipment becomes, little or nothing is done to clean it.

Dirty machines start to malfunction.

Dark, dirty, disorganized workplaces lower workers' morale.

Discipline is important, because without it, implementation of the first four pillars quickly fall apart. It is the band that holds it all together.
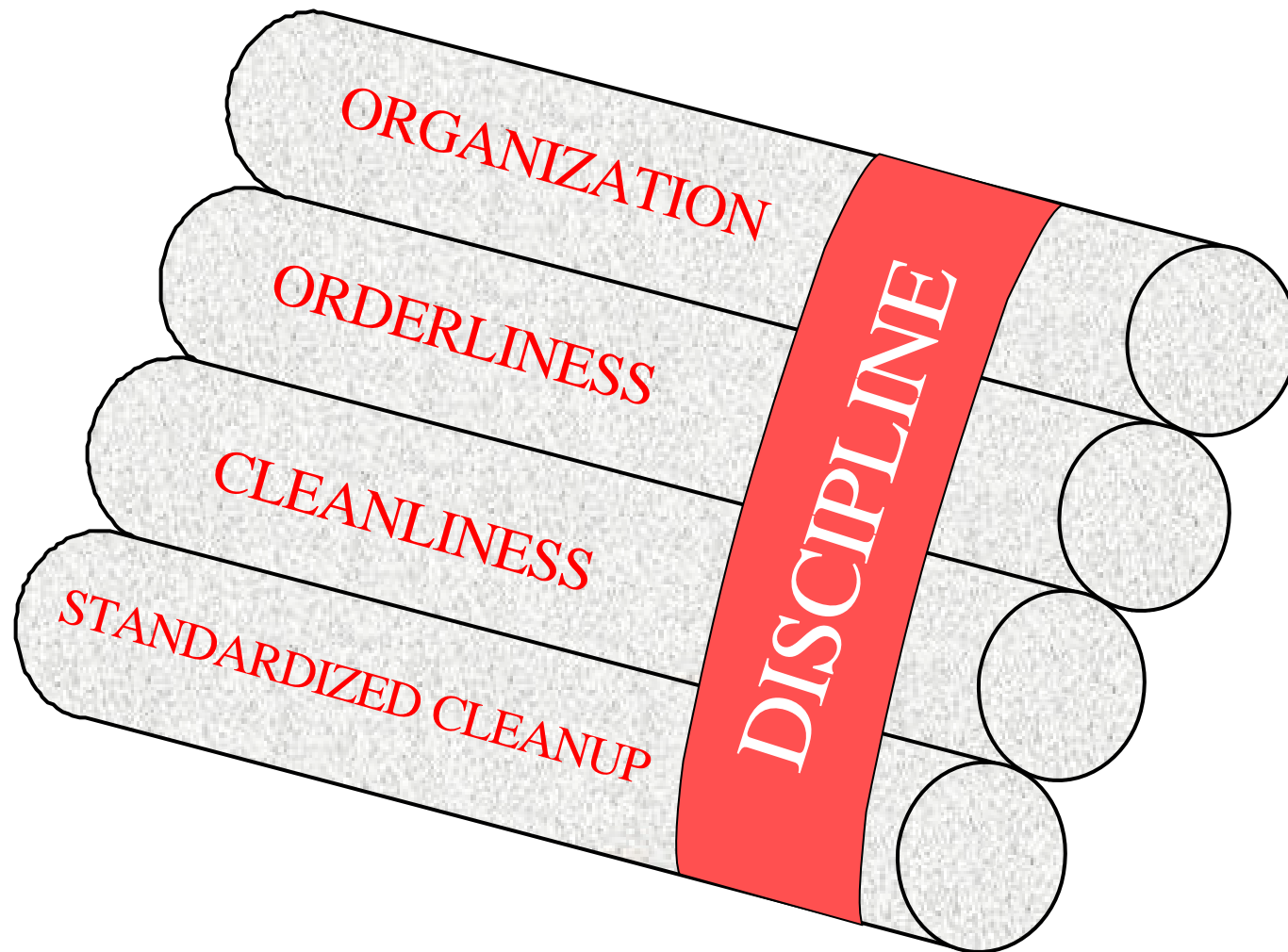
Why Discipline Is Important

Usually you discipline yourself to maintain a particular course of action because the rewards for keeping to the course are greater than the rewards for departing from it.

Suppose you want to start an exercise program. You need discipline to stick to this course. The rewards of sticking to your exercise program are greater than the rewards of not sticking and you will probably maintain the discipline of this program.

Creating Conditions
for the Implementation of Discipline

Discipline is different from Organization, Orderliness, or Cleanliness, and even from Standardized Cleanup, in the sense that it is not visible and cannot be measured.
It exists in people's hearts and minds - and only their behavior shows its presence.

Because of this it cannot exactly be "implemented" like a technique. However, we can create conditions that encourage the implementation of Discipline.
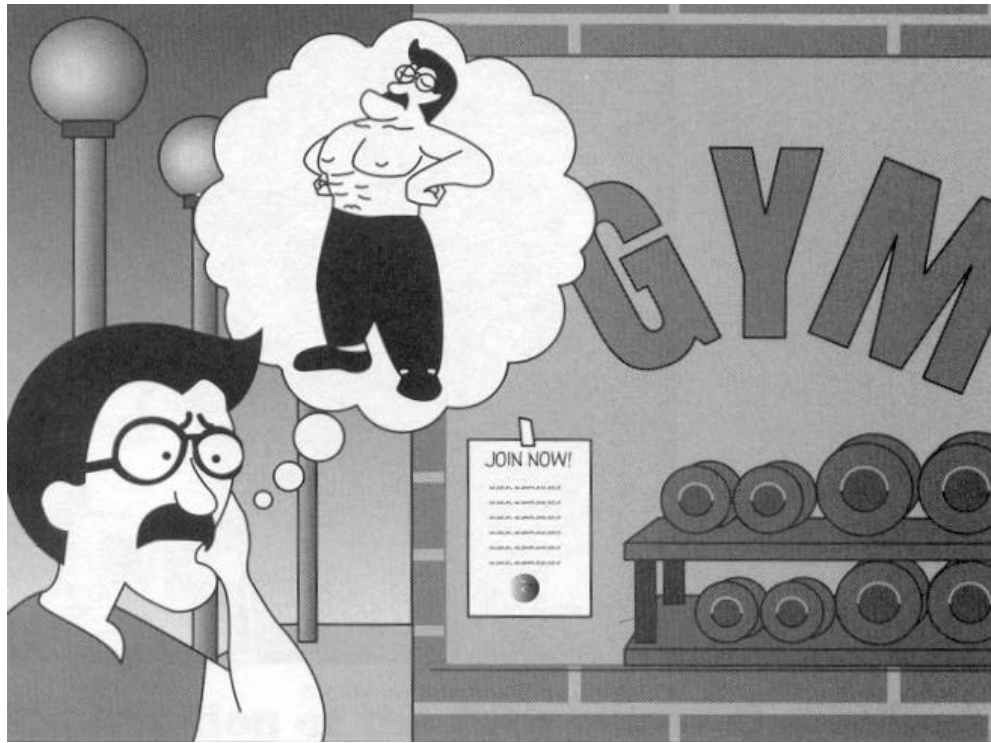
Go back to our exercise program, how could you create conditions in your own life that would encourage the discipline of working out at a gym?

You might: join a gym with a friend so you can work out together and encourage each other.

Conditions That Will Promote Discipline

AWARENESS

You need to understand what the five pillars are and how important it is to maintain Discipline with respect to five pillar implementation.

TIME

You need to make enough time in your schedule to perform **five** pillar implementation.

STRUCTURE

You need to have a structure for how and when **five** pillar activities will be implemented.

Conditions That Will Promote Discipline

SUPPORT

You need to have support for your efforts from management, in terms of acknowledgment, leadership, and resources.

REWARDS AND RECOGNITION

Your efforts need to be rewarded.

SATISFACTION AND EXCITEMENT

The implementation of the **five** pillars needs to be satisfying for you. This satisfaction is communicated from person to person, allowing five pillar implementation to build as it involves more people.

PRODUCT DIVERSIFICATION

HIGHER QUALITY

HIGHER AVAILABILITY RATE

LOWER COSTS

IMPROVED SAFETY

RELIABLE DELIVERIES

ORGANIZATION
Clearly distinguish needed items from unneeded items and eliminate the latter.

ORDERLINESS
Keep needed items in the correct place to allow for easy and immediate retrieval.

DISCIPLINE
Make a habit of maintaining established procedures

STANDARDIZED CLEANUP
This is the condition we support when we maintain the first 3 pillars.

CLEANLINESS
Keep the workshop swept and clean.